

While loop:-

Used when you want to repeat code as long as a condition is true.

Syntax:-

```
while condition:  
    # code
```

Initialization
while (condition):
 statements
 inc/dec.

Example:-

```
count = 1  
while count <= 5:  
    print(count)  
    count += 1
```

Print characters of 'Python'

```
i = 0  
while i < len(var):  
    print(var[i])  
    i += 1
```

Sum of Digits Program.

ex:- 1234 $\rightarrow 1+2+3+4=10$

```
sum = 0  
num = int(input())  
while num > 0:
```

```
    rem = num % 10
```

```
    sum = sum + rem
```

```
    num = num // 10
```

```
print(sum)
```

Palindrome:-

```
num = int(input())
```

```
original = num
```

```
rev = 0
```

```
while (num > 0):
```

```
    rem = num % 10
```

```
    rev = rev * 10 + rem
```

```
    num = num // 10
```

```
if print(original, rev)
```

```
if (original == rev):
```

```
    print("the num is not palindrome")
```

```
else:
```

```
    print("the num is not palindrome")
```

fibonacci series.

```
a, b = 0, 1
```

```
i = 1
```

```
while (i <= 7):
```

```
    print(a)
```

```
    s = a + b
```

```
    a, b = b, s
```

```
    i = i + 1
```

nested for loops:-

```
for i in range(1, 6):
```

```
    for j in range(1, 6):
```

```
        print(i, end=" ")
```

```
    print()
```

O/P: 1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

1 2 3 4 5

